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26271	7590	01/13/2006	EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I (i.e., claims 1-9 and 18-21, classified in class 52, subclass 721.3) in the reply filed on 26 October 2005 is acknowledged.

Claims 10-17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention (i.e., Group II), there being no allowable generic or linking claim.

Response to Amendment

The examiner notes that Applicant has put incorrect status identifiers on numerous of the claims in his Amendment in Response to Non-Final Office Action filed on 17 May 2005. More particularly, claims 4, 9, 11-13, 16, 17, 19, and 21 were all labeled with the status identifier of "Previously Presented" when they should have been labeled with the status identifier of "Original". The status identifier "Previously Presented" is only to be used in the situation where the claim was amended at one time, but in the present amendment the claim is not being amended.

The amendment filed 17 May 2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no

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amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

(1) it is believed that present Fig. 1A corresponds to original Fig. 1 and present Fig. 1A adds new matter in that:

(a) a solid line parallel to the left-edge of concrete body 103 has been deleted,

(b) offset surface 109b has been added, and

(c) reference numerals "105" and "107" have been interchanged;

(2) it is believed that present Fig. 1B corresponds to original Fig. 1A and present Fig. 1BA adds new matter in that:

(a) a solid line through hole "111" has been deleted, and

(b) reference numerals "105" and "107" have been interchanged;

(3) Fig. 2 adds new matter in that:

(a) reference numeral "109" has been replaced with "109a",

(b) reference numeral "109b" has been moved,

(c) offset sections 109b have been added,

(d) reference numeral "105" has been replaced with reference numeral "107", and

(e) reference numeral "103" has been added;

(4) Fig. 2 adds new matter in that:

(a) reference numeral "107" has been replaced with reference numeral "105", and

(b) reference numeral "109" has been replaced with reference numeral "109a"; and

(5) new Fig. 5 has been added which constitutes new matter because there is no provision in the original disclosure for a conical section (i.e., the only possible for support for the addition of Fig. 5 which Applicant points to is the last sentence in paragraph no. [0013] which states that "[i]n further embodiments, the sidewalls 113 may not be generally straight and the bottom end wall 107 may provide a larger and/or irregular surface area.", but this does not provide support for the conical section now shown in Fig. 5 because bottom end wall 107 appears to have a smaller surface area than top end wall 105 and because the last sentence of paragraph no. [0013] does not specifically say "conical section" and numerous other shaped sections could satisfy the incomplete description given.

Therefore, Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Objections

Claim 5 is objected to because of the following informalities:

Claim 5, line 2, "tapers" should be changed to --taper-- for proper grammar.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-9 and 18-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(1) **Claim 1**, line 2, the recitation of "said foundation pile" is vague, indefinite, and confusing as lacking antecedent basis because it is not clear if "said foundation pile" refers back to "A foundation pile apparatus" recited in line 1 of claim 1.

- (2) **Claim 1** (lines 6, 7, 7-8, 8, and 10),
claim 2 (line 2),
claim 3 (lines 1-2 and 2-3),
claim 5 (lines 1-2),
claim 6 (line 2),
claim 7 (lines 2-3 and 3),
claim 18 (lines 6, 7, 8, and 10-11), and
claim 20 (lines 2 and 3),

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the recitation of "all around sidewalls" is vague, indefinite, and confusing because the term "all around sidewalls" is not a commonly used term in the art and has not been adequately defined in the specification.

Indeed, the only places in the specification where the term "all around sidewalls" appears is on page 1, at line 4 of paragraph no. [0003] and in the third line of the abstract on page 13. The only definition of the term "all around sidewalls" appears to be as follows:

The sidewalls extend between the top end wall and the bottom end wall and has at least one (but, preferably two or more) spiral ridge that extends generally about the surface of the sidewall. Further, this spiral ridge extends in a generally spiral direction from the top end wall to the bottom end wall. The spiral ridge provides an offset surface that extends generally outward from the surface of the sidewalls. The surface area of this offset surface significantly enhances the load bearing capacity of the pile.

Thus, it appears that the "all around sidewalls" are the two discontinuous, semi-circular cross-section sidewalls represented by reference numeral "113" in original Fig. 1 (and present Fig. 1B), but this is confusing because it seems to go against the common everyday meaning of the term "all around sidewalls" which implies a continuous, round cross-sectional surface. While Applicant is allowed to be his own lexicographer, he is not allowed to use a term in a manner that goes against the plain meaning of the term.

Further, the term "all around sidewalls" is vague, indefinite, and confusing because it is not clear if the offset surfaces "109b" are a part of the "all around sidewalls" or not.

(3) **Claim 4**, line 3, the recitation of “an offset surface” is vague, indefinite, and confusing as lacking antecedent basis since it is not clear if “an offset surface” refers back to “an offset surface” and “said offset surface” recited in claim 1, lines 9-10 and lines 10-11, respectively.

Further, as the claim is recited in lines 2-3, the two vertical section halves mutually facing one another is said to create only one offset surface which appears to form both the first and second spiral ridges. This is vague, indefinite, and confusing because it appears the claim should recite that the two vertical section halves mutually face each other in an offsetting manner to create first and second offset surfaces which form the first and second spiral ridges, respectively.

(4) **Claim 9**, lines 1-2, recite that “said body has a generally round shape” and “said concrete body has a generally round shape”, respectively, which is vague, confusing, and indefinite because the body has a generally cylindrical or tubular shape with an outer wall or perimeter that is generally round or circular in cross-section.

(5) **Claim 20**, line 5, the recitation of “said end wall” is vague, indefinite, and confusing as lacking antecedent basis because both a top end wall and a bottom end wall have been recited in claim 18 and it is not clear is “said end wall” in referring back to the top end wall or the bottom end wall.

(6) **Claim 21**, lines 1-2, recite that “said body has a generally round shape” and “said concrete body has a generally round shape”, respectively, which is vague, confusing, and indefinite because the body has a generally cylindrical or tubular shape with an outer wall or perimeter that is generally round or circular in cross-section.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1, 2, 6, and 9 are rejected under 35 U.S.C. 102(a) as being anticipated by Xu et al. (U.S. Patent Application Publication No. 2002/0168232).

As to claim 1, Xu et al. discloses an apparatus (see Fig. 15) which is capable of functioning as a foundation pile and which can provide support to an above-ground structure, said apparatus comprising;

a generally solid body (segment shown in Fig. 15 from 190 of Fig. 14) having,

a top end wall (end wall shown in Fig. 15),

a bottom end wall (end wall opposite end wall shown in Fig. 15) adapted for providing load bearing capacity, and

all around sidewalls (sidewall of left half of cylindrical segment of Fig. 15, sidewall of right half of cylindrical segment of Fig. 15) extending between said top end wall and said bottom end wall, said all around sidewalls having a ridge (of width "B") extending generally about said all around sidewalls and integral to said all around sidewalls and in a generally downward direction from said top end wall to said bottom end wall, wherein said ridge has an offset surface extending generally outward from a surface of said all around sidewalls, said offset surface providing additional load bearing capacity.

As to claim 2, Xu et al. disclose the apparatus of claim 1 as discussed above, and Xu et al. also disclose that said ridge is a spiral ridge extending in a generally downward spiral direction about said all around sidewalls (see Fig. 15).

As to claim 6, Xu et al. disclose the apparatus of claim 1 as discussed above, and Xu et al. also disclose that said ridge extends spirally downward about said all around sidewalls from said top end wall to said bottom end wall (see Fig. 15).

As to claim 9, Xu et al. disclose the apparatus of claim 1 as discussed above, and Xu et al. also disclose that said body has generally round shape in cross-section (see Fig. 15).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xu et al. (U.S. Patent Application Publication No. 2002/0168232).

As to claim 3, Xu et al. disclose the apparatus of claim 1 as discussed above.

Xu et al. fail to explicitly disclose that said all around sidewalls include a second spiral ridge extending generally about said all around sidewalls.

However, it is well settled that duplication of parts is not a patentable difference. See *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) (Claims at issue were

directed to a water-tight masonry structure wherein a water seal of flexible material fills the joints which form between adjacent pours of concrete. The claimed water seal has a "web" which lies ** in the joint, and a plurality of "ribs" ** >projecting outwardly from each side of the web into one of the adjacent concrete slabs. <The prior art disclosed a flexible water stop for preventing passage of water between masses of concrete in the shape of a plus sign (+). Although the reference did not disclose a plurality of ribs, the court held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced.).

It would have been an obvious expedient to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Xu et al. to have two spiral ridges to enhance the VIV reduction effect and particularly since it has been well established that mere duplication of parts is not a patentable difference.

As to claim 7, Xu et al. discloses the apparatus of claim 1 as discussed above.

The embodiment of Xu et al. shown in Fig. 15 fail to explicitly disclose that said body includes two spiral ridges, each said ridge extending spirally downward about said all around sidewalls and traversing horizontally about said all around sidewalls an arc distance of about 90°. However, the top three segments of 190 shown in Fig. 14 teach a spiral ridge extending spirally downwardly about said all around sidewalls and traversing horizontally about said all around sidewalls an arc of about 90°.

It is well settled that duplication of parts is not a patentable difference. See *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) (Claims at issue were directed to a water-tight masonry structure wherein a water seal of flexible material fills the joints

which form between adjacent pours of concrete. The claimed water seal has a “web” which lies ** in the joint, and a plurality of “ribs” ** >projecting outwardly from each side of the web into one of the adjacent concrete slabs. <The prior art disclosed a flexible water stop for preventing passage of water between masses of concrete in the shape of a plus sign (+). Although the reference did not disclose a plurality of ribs, the court held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced.).

Further, the Fig. 5 embodiment of Xu et al. teach the desirability of providing a pair of opposed ridges (132d, 132d) which are displaced 180° apart.

Therefore, it would have been an obvious expedient to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Xu et al. to have two spiral ridges which are displaced about 180° apart and which traverse an arc of about 90° to enhance the VIV reduction effect and particularly since it has been well established that mere duplication of parts is not a patentable difference.

As to claim 8, Xu et al. disclose the apparatus of claim 1 as discussed above.

Xu et al. fail to explicitly disclose that said body includes two spiral ridges, each with offset surfaces, said offset surfaces providing a load bearing surface that is between about .35 to .55 times the load bearing surface of said top end wall.

It is well settled that duplication of parts is not a patentable difference. See *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) (Claims at issue were directed to a water-tight masonry structure wherein a water seal of flexible material fills the joints which form between adjacent pours of concrete. The claimed water seal has a “web”

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which lies ** in the joint, and a plurality of "ribs" ** >projecting outwardly from each side of the web into one of the adjacent concrete slabs. <The prior art disclosed a flexible water stop for preventing passage of water between masses of concrete in the shape of a plus sign (+). Although the reference did not disclose a plurality of ribs, the court held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced.).

It would have been an obvious expedient to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Xu et al. to have two spiral ridges with offset surfaces to enhance the VIV reduction effect and particularly since it has been well established that mere duplication of parts is not a patentable difference. Establishing an offset surface that is between about .35 to .55 times the surface of the top end wall, thus providing an appropriate VIV reduction effect as may be deemed appropriate, would have constituted an obvious expedient to one of ordinary skill in the art at the time the invention was made.

Allowable Subject Matter

Claims 4, 5, and 19-21 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claim 18 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Response to Arguments

Applicant's arguments with respect to claims 1-9 and 18-21 have been considered but are moot in view of the new grounds of rejection.

Conclusion


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Various foundation pile apparatus configurations are shown in: U.S. Patent No. 6,948,884 to Xu et al.; U.S. Patent No. 1,848,339 to Geiger; U.S. Patent No. 3,636,718 to Keats; U.S. Patent No. 4,911,581 to Mauch; U.S. Patent No. 3,621,663 to Otani; U.S. Patent Nos. 6,283,231 and 5,875,860 both to Coelus; U.S. Patent No. 6,471,445 to Stansfield; U.S. Patent No. 4,504,173 to Feklin; U.S. Patent No. 5,722,498 to Van Impe et al.; U.S. Patent No. 6,264,403 to Hall et al.; U.S. Patent No. 996,688 to Vernon-Inkpen; U.S. Patent No. 1,258,482 to Shuman; U.S. Patent No. 4,405,262 to Nagashima; U.S. Patent No. 3,277,968 to Grimaud; U.S. Patent No. 3,971,227 to Godley; and U.S. Patent No. 4,543,015 to Kruse.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gay Ann Spahn whose telephone number is (571)-272-7731. The examiner can normally be reached on Monday through Thursday, 8:30 am to 7:00 pm.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Gay Ann Spahn, Patent Examiner
January 7, 2006



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